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HENRY HUDSON LANDS FROM THE *HALF MOON* (left) TO EXCHANGE GIFTS WITH THE FIRST CITIZENS OF NEW YORK (Bulletin No. 2)

Bulletin No. 1, March 2, 1953

Formosa Again Becomes Front-Page News

FORMOSA now poses a threat to communist China for the first time in three years.

At the start of the Korean war in 1950, United States warships were ordered to south China waters to guard the island from invasion and also to prevent any attack from the island on the mainland. President Eisenhower calls this shielding a hostile coast and has changed the fleet's orders. The communists henceforth must watch Formosa.

The island lies a short distance off the southeast coast of China, south of Japan and north of the Philippines. The capital of Chiang Kai-shek's nationalist government is at Taipei in the extreme north. During Japan's half-century of occupation the city was called Taihoku.

Many Refugees Add to Population

Formosa is 245 miles long and 88 miles across at its widest point. In shape it somewhat resembles a crouching mouse with a stubby tail pointing south. The Tropic of Cancer crosses the island at a point some 100 miles from its southern tip.

Formosa's present population, greatly swollen by nationalist government personnel and refugees from mainland China, is estimated at 9,500,000, including about 500,000 nationalist soldiers, airmen, and sailors.

Formosa is within easy striking distance of China's mainland, which, at its closest point is only 85 miles to the west across the rough and windy Formosa Strait. Nearest mainland ports of importance are Swatow on the south, about 220 miles away; Amoy, 140 miles distant; and Minhow (Foochow), 130 miles from the northern tip of the island.

The great city of Shanghai is only 440 miles from Taipei, to the north and west. Canton, to the west and south, is little farther.

Along Formosa's west coast, facing the mainland of China, are fertile lowlands and beaches well adapted to military operations. In the mountain range that runs the length of the island nearly half a hundred peaks rise at least 10,000 feet above sea level. The mountain spine comes down to the sea on the east to make a precipitous coast of cliffs.

Bypassed in Drive Toward Japan

The Japanese, who took Formosa from China in 1895, used bases there as a springboard for the invasion of the Philippines early in World War II, and for other strategic moves.

As the Allies moved toward Japan in the late stages of the war, they bypassed Formosa, after destroying its installations by air attacks.

At the war's end in 1945, control of Formosa reverted to China, and in the Chinese civil war it became the last stronghold of the nationalists as the communists swarmed over the mainland.

The name by which Westerners know the island was given it by early Portuguese navigators. They are said to have been so impressed with its

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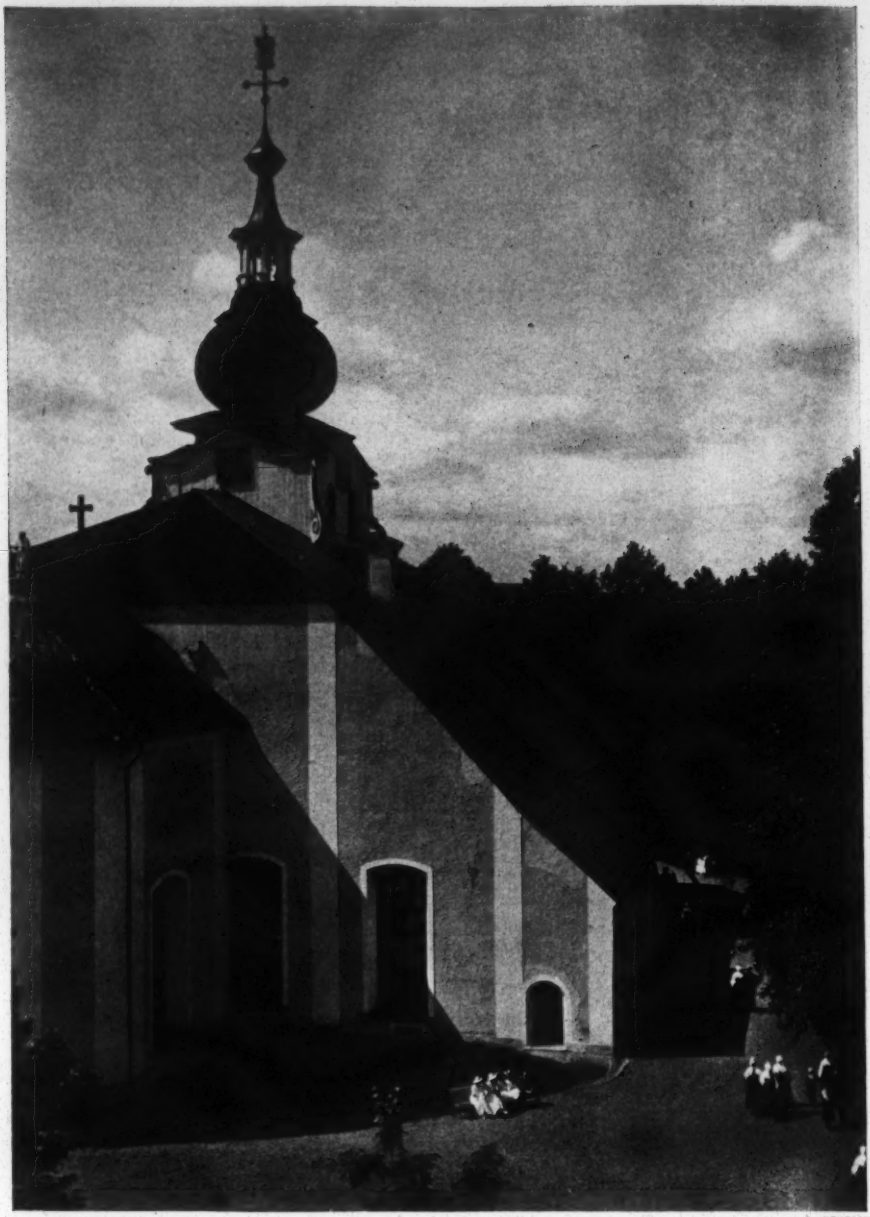

G. HEURLIN

THE ONION-SHAPED DOME OF LEKSAND CHURCH SHOWS THE INFLUENCE OF RUSSIA'S ARCHITECTURE

This largest country church in Sweden (Bulletin No. 5) was built early in the 18th century—after the war against Russia, Poland, and Denmark—by Swedish soldiers returned from captivity in Russia. Residents of the little resort village in the beautiful Lake Siljan region of south-central Sweden usually wear the traditional costumes of their province on Sundays. One of the most colorful festivities is the celebration of Midsummer Day when church services, bonfires, and Maypole dances carry on the old traditions and enliven the countryside.

New York City Celebrates 300th Birthday

THAT $24 investment in real estate must seem like a fairly sound bargain to Father Knickerbocker these days as his New York starts on a year-long celebration of its 300th anniversary.

Actually no cash changed hands when the Dutch bought Manhattan Island; they paid the Indians its equivalent in bright cloth and trinkets. But then, strictly speaking, what they bought was not an island in the present sense.

To Redmen It Was "Heavenly Land"

There are many other odd things about this amazing strip of land, now the heart of the world's largest metropolis. The river to its west is the North River. Its East River is not a river at all. An Englishman, not the Dutch, was the first to report the island's name.

Early Dutch settlers started the usage of North River to distinguish it from the South River, now the Delaware. Three centuries later New Yorkers still refer to the Hudson as North River. As for the East River, it is really a salt-water tidal strait, connecting the Upper Bay with Long Island Sound.

Henry Hudson, an English captain in Dutch pay (illustration, cover), entered the harbor in 1609 and explored the river which bears his name. He took note of the island at its mouth, recording in his logbook that the Indians called it "Man-a-hat-ta," their words for "Heavenly Land."

Almost a century earlier, Verrazano, the Italian explorer, had reached the entrance of New York harbor but hove to before the Narrows, that wasp-waisted channel to the Upper Bay made by Staten Island and Long Island. He decided that the waters which giant luxury liners of 80,000 tons now regularly use with ease were too risky for his 100-ton caravel. Instead, he ventured into the Upper Bay in a tiny sailboat and pronounced it "a very beautiful lake."

"City" Began with 800

The anniversary New York is observing marks its tercentenary as a city, not its founding. There was a trading post there not long after Hudson's visit, and real colonization began in 1626 under Peter Minuit, who bought the land from the "Manhattoes," as the Dutch called the Indians.

By 1653 the settlement had grown to some 120 crude, red-roofed dwellings, plus a windmill and pier. Eight hundred people lived there and the leather-breeched community fathers decided that was enough to warrant incorporation as a "city." Greater New York's present population tops 8,000,000, 2,000,000 of it on Manhattan Island. Six million live in the city's four other boroughs.

Manhattan does not lack for extra names, past and present. Originally it was part of New Netherlands. Minuit named it New Amsterdam. Captured by the British in 1664, it was renamed New York for the Duke of York, brother of Britain's Charles II.

Washington Irving, the writer, is responsible for creating Father

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beauty that they exclaimed, *"Ilha Formosa!"* which means "beautiful island." In both Chinese and Japanese it is known as Taiwan, or "Bay of Terraces." For a brief period Formosa was ruled by the Dutch. In 1662 the warrior hero Cheng Chen Kung, son of a Chinese father and a Japanese mother, drove them out and re-established Chinese rule.

The original inhabitants, who not long ago practiced head-hunting, have been crowded to the interior by the Chinese, although the Japanese impressed some of them into military service during the war. They are of Indonesian stock, and estimated to number about 150,000. Most of them live in the wilds of the eastern mountains.

Formosa's chief crops are rice, sugar, and tea grown in the western lowlands and the north. Pineapples are raised successfully and the island's pineapple-canning industry rivals that of Hawaii and Malaya.

From Formosa's forests, which cover nearly two-thirds of the island, comes most of the world's supply of natural camphor.

NOTE: Formosa is shown on the National Geographic Society's map of The Far East. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

For further information, see "Formosa—Hot Spot of the East," in *The National Geographic Magazine*, February, 1950; "I Lived on Formosa," January, 1945; and "Formosa the Beautiful," March, 1920. *(Back issues of the Magazine may be obtained by schools and libraries from the Society's headquarters at a special discounted price of 50¢ a copy, 1946 to date; 90¢, 1930-1945; $1.90, 1913-1929. Earlier issues at varied prices.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, October 9, 1950, "Formosa Stands Guard off China."

FORMOSA: BACK IN A HOT-SPOT ROLE

Strategically located, the island refuge of Chinese nationalists is an ideal base from which to harry the communist-held mainland. Japan found it a big asset in mounting the swift conquest of Southeast Asia which followed Pearl Harbor.

Bulletin No. 3, March 2, 1953

El Salvador Pushes Lempa Dam Construction

EL Salvador is counting on a river with four-eyed fish to open a new era for the country.

The river is the Lempa, largest in Central America. The big occasion comes next summer with completion of the first hydroelectric project in a program to harness its waters and put them to work for the people.

Bifocals by Nature

Salvadorans call the strangely equipped denizens of these waters *cuatro-ojos* ("four eyes" in Spanish). The name is no flight of fancy, for nature has provided them with a special set of bifocals.

The bulbous eyeballs of the fish are divided. The upper part is adapted for looking through the air, hence enables them to scan the river's surface for floating food. The lower portions of the eye are for subsurface seeing, whether in hunting food or watching out for underwater enemies.

Construction of the first dam on the river in which "four eyes" lives began three years ago. The completed structure will be more than 160 feet high and have a face 1,500 feet across.

The site is Chorrera del Guayabo (Guava Falls). This was out in untamed country when selected; wild beasts hunted there and scavenger birds patrolled the skies. A small city soon sprang up for the army of workers on the dam. The community is complete with homes, offices, shops, a church, and a recreation center. A road has been pushed across two volcanic ranges to link it with San Salvador, the capital, some 40 miles to the southwest.

Coffee Rich; Power Poor

Although the smallest, El Salvador is reported perhaps the busiest and most prosperous of Central American nations today, thanks to its bountiful soil. In all the world only Brazil and Colombia grow more coffee. El Salvador's crop brings in eight out of every ten dollars earned in trade with other countries.

This, however, puts the common welfare virtually at the mercy of a single crop. Should disaster reduce the crop or should the price of coffee nose-dive, Salvadorans could be hard hit financially.

Facing up to the situation, the country has set out to conquer its major handicap, insufficient power. Progress has been hampered in many ways by lack of electricity. Farmers do without. Industrial development is hobbled. So is exploitation of timber and mineral resources. Towns, cities, even the capital, hoard their meager supply of power from steam and Diesel generating plants.

The $20,000,000 Lempa River project—already being referred to as the TVA of Central America—marks the first step toward ending the problem. The electricity produced will be almost twice the present supply. This, planners believe, will make possible the greater diversity of employment which is essential in the modern world, and also reduce the great dependence on the coffee crop.

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Knickerbocker as the personification of the city, hence it is often called his town. Irving also nicknamed it Gotham because "so many wise-acres" (people pretending to have great wisdom) lived there in his day. He was a native New Yorker himself, by the way.

Visitors can take a boat trip around Manhattan today, but Peter Minuit did not buy that kind of an island. Part of the Harlem River, which connects the Hudson and East rivers is a man-made canal. Until this channel was cut through in 1895, only an unnavigable creek existed between the two.

Speaking of islands, Bedloe's Island, on which the Statue of Liberty stands, is identified in most minds with New York. So is Ellis Island, gateway to America for so many millions of immigrants. Both, however, lie within the boundaries of New Jersey.

NOTE: New York City is shown on the National Geographic Society's maps of the Northeastern United States, and The Reaches of New York City.

See also, "The Mohawks Scrape the Sky," in *The National Geographic Magazine* for July, 1952; "Long Island Outgrows the Country," March, 1951; "Shrines of Each Patriot's Devotion," January, 1949; "The Mighty Hudson," July, 1948; "Drums to Dynamos on the Mohawk," July, 1947; and "Shad in the Shadow of Skyscrapers," March, 1947.

WILLARD R. CULVER

THROUGH BROOKLYN BRIDGE CABLES, PETER MINUIT'S PURCHASE LOOKS LIKE A FAIRY-TALE CITY

The first bridge to span the East "River" was opened in 1883, just 257 years after Peter Minuit acquired Manhattan from its Indian owners by barter. An almost solid mass of masonry, relieved by green parks and squares, the island where 800 settlers lived at the incorporation of the city (now being celebrated) today has some 2,000,000 residents. The population of the entire city, Manhattan plus the boroughs of Brooklyn, Queens, Bronx, and Richmond (Staten Island), totals nearly 8,000,000.

Bulletin No. 4, March 2, 1953

Australian Sapphire Supply Rivals Ceylon's

ANOTHER huge sapphire has been added to the list of those found in Australia, bringing that continent-commonwealth to the fore as a rival of Ceylon—Indian Ocean island long noted as a source of the gem.

The newest find—three inches long, two inches wide, half an inch thick—was picked up by a vacationer at Emerald in central Queensland, near the spot where the Golden Willow sapphire was found in 1952. The Willow is said to be the largest yellow sapphire yet known.

Picnicker Picks up Record-breaker

Another headline discovery in 1952 was an enormous black star sapphire estimated to be worth $224,000. It turned up in New South Wales.

What is believed to be the world's largest sapphire, regardless of color, is a blue gem discovered in Queensland some years ago. Its original weight was 2,303 carats, but the head of Abraham Lincoln was carved on it, reducing it to 1,318 carats—about eight and a half ounces. The stone was widely exhibited in the United States last year.

The largest sapphire up until that find was a blue gem of 1,950 carats which a miner's wife came upon while picnicking near Emerald in 1948. Only a few months before the famous Black Star of Queensland was found in the same vicinity. The Black Star weighed 1,156 in the rough and cutting reduced it to 733 carats, but its size was still sufficient to end the three-century reign of the 543-carat Star of India as the world's largest. The latter historic gem, a blue sapphire, is now in the American Museum of Natural History in New York City.

Sapphires are bracketed with rubies and emeralds as the "other precious stones" in the gem aristocracy. At one carat and less, the diamond is easily the most valuable. At four carats or more, flawless rubies and emeralds are rare and more valuable than diamonds.

For quality and quantity, the diamond leads. An estimated $15,000,000,000 is invested in diamonds. Most of these come from mines in Africa. A London syndicate regulates their flow to world markets.

Same Elements Make Rubies and Sapphires

Diamonds support a big international industry of miners, cutters, polishers, designers, and dealers. Rubies, sapphires, and emeralds are in demand and bring high prices. Because nature's supply of the latter is limited and undependable, old jewelry is an important source.

Rubies and sapphires are chemically the same. Both are corundum, the sesquioxide of aluminum, second only to the diamond in hardness. They differ only in color, supplied in nature's crucible during volcanic ages when the stones were formed.

The most prized rubies are of a shade called pigeon's-blood, but colors range from rose to purple. Sapphires are usually pictured as a cornflower blue, but include all precious corundum that is not reddish, ranging from crystal-clear through yellow, green, and blue, to black.

It is not surprising, therefore, that rubies and sapphires sometimes

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A power supply is only one aim of the Lempa program. It includes provision for irrigation systems in arid areas and control of floods which each year carry away tons of fertile soil to the Pacific Ocean.

Even before completion of the Guava Falls project, three other locations on the Lempa are being studied as potential sites for additional hydroelectric plants. Not content with river resources, the government has had experts investigating the possibility of tapping its volcanoes for power, as has been done successfully near Florence, Italy.

Guava Falls is expected to produce 45,000 kilowatts at first, gradually increasing to 75,000. And that is not all. Since the dam will impound a large artificial lake in scenic country, Salvadorans foresee the area becoming a vacation playground and tourist attraction.

Whether it will be a mecca for anglers is debatable. Once a native fisherman was trying futilely—and with a net—to catch a cuatro-ojos for a visitor from the United States. Chided about his poor luck, the man replied reproachfully, "But, señor, you do not understand; those animals have *four* eyes!"

NOTE: El Salvador is shown on the Society's map of Countries of the Caribbean.

For further information, see "Coffee Is King in El Salvador," in *The National Geographic Magazine* for November, 1944; and "Volcano-Girded Salvador," February, 1922; and "Pan American Highway Makes Progress," in the GEOGRAPHIC SCHOOL BULLETINS, October 2, 1950.

LUIS MARDEN

A NEW COFFEE QUEEN IS CROWNED IN EL SALVADOR, CENTRAL AMERICA'S TOP COFFEE COUNTRY

Beauties of the court—former queens and contenders for the title—wear native Indian costumes at the coronation of the annually elected queen in San Salvador, the capital. The ceremony is a feature of the Coffee Ball celebrating the coffee harvest, El Salvador's chief source of wealth.

Bulletin No. 5, March 2, 1953

English Now Required in Swedish Schools

ENGLISH is on its way to becoming Sweden's second tongue. What is more, school children do not find the subject difficult to study.

Within a few years all the young people will be acquainted with the language of Shakespeare and Longfellow because every child must attend school and English is now a required course.

German and French Lose Popularity

One reason why Swedish pupils find English easier to learn, some believe, is that it is less complicated than German or French, other languages taught in the past. Compared with these, English grammar is simple and not burdened with a host of rules.

Another is that English and American literature offers a seemingly endless variety of interesting and exciting stories that especially appeal to those of school age.

Many things have played a part in the growth of the language's popularity. Not the least of them is that Swedish families have so many relatives in the United States where there are an estimated million and a half persons of Swedish descent. Mail and travel between the two countries has increased accordingly.

The sheer weight of America in world affairs has underscored the universal importance of its language. The advent of radio and, in particular, the great expansion of international broadcasting during recent years also have been leading factors. Hollywood's motion pictures are credited with making the language even more familiar. Today, advertising signs in English are no rarity; neither are English expressions and turns of phrasing in newspapers.

School Opportunities Being Expanded

Inauguration of required courses in English has been linked with a ten-year plan for improving the educational system. Sweden has decided that an elementary-school education is not enough; the law now provides for further schooling—roughly equivalent to junior high and part of high school in the United States. Unwilling scholars find no loopholes. If they fail to graduate, they have to attend school another year.

Sweden has had free elementary education and obliged the country's children to take advantage of it since 1842, or well before the public school system became extensive in the United States.

Besides the addition of higher school training, an outstanding feature of the new program is the gradual substitution of a uniform course of elementary studies for the varied ones prevailing in the past. The aim is to give all pupils the same basic grounding in knowledge while in the lower grades, then permit them to specialize in classical or vocational courses later.

Schools days are not all "readin', 'ritin', and 'rithmetic" for young Swedes. Their country is a great one for outdoor sports, and nearly every school child learns to swim and to ski. Care is also taken of

occur together in nature, as in Burma, Ceylon, and Siam. Emeralds, entirely different in composition, have long been a virtual monopoly of mines near Bogotá, Colombia. A few are mined in the Ural Mountains of Russia and in North Carolina.

All four precious stones have been produced artificially by combining their chemical elements under heat. Stones thus made are termed "synthetic." These, as well as natural stones, especially sapphires, are used in pinhead sizes as bearings for moving parts of fine watches and other delicate mechanisms.

Literally tons of low-grade diamonds and diamond dust are consumed industrially for grinding and polishing and other uses. In recent years four tons of newly mined industrial diamonds have been sold for every ton of gem stones. Industrial diamonds represent almost 30 per cent of the dollar value, compared to five per cent before the war.

Only rubies and sapphires have stars. In those stones, corundum forms in six-sided crystals which sometimes include tiny needles of unrelated mineral. When these are present, they reflect light from outside. If the gem is cut with a convex face, the light appears in the form of an embedded six-pointed star. Several large star rubies and star sapphires are among the most famous and valuable of gem stones.

NOTE: See also, "'Rockhounds' Uncover Mineral Beauty," in *The National Geographic Magazine* for November, 1951; and "Exploring the World of Gems," December, 1950.

B. NEWMAN—THREE LIONS

WITH PEN AND INK, A DIAMOND CUTTER DRAWS THE PATTERN BY WHICH HE WILL CUT THE GEM

Gem cutting requires great skill and accuracy. Facets (small planes or faces) must be so cut in relation to each other that they will reveal the sparkling light that is the diamond's great beauty.

the children's health, and a large number in both elementary and secondary schools receive a free meal daily.

At present, those attending such schools represent almost one-tenth of the nation's population, which is slightly more than 7,000,000. Opportunities for higher education also are improved under the new program since it calls for lower tuition as well as more help to worthy students in the form of scholarships or loans.

Some grade schools still lack English classes but that is because it takes time to train teachers for them. Sweden has found children of kindergarten age can learn to speak the language rapidly and well, but adults have trouble acquiring the correct pronunciation of words.

A story is told of a pioneer teacher of English who was well versed in its grammar and literature. He taught well, too, except for the way words should be spoken.

One day the word "knife" appeared in a lesson and some pupils indicated they thought he mispronounced it.

"Well, boys," said the old man, "I believe some people say *nife*, but I've always said *kanife* and we'll stick to that."

NOTE: Sweden is shown on the Society's map of Europe and the Near East.

For additional information, see "Baltic Cruise of the *Caribbee*," in *The National Geographic Magazine* for November, 1950; "Rural Sweden Through American Eyes," June, 1940; "Life's Flavor on a Swedish Farm," September, 1939; and "Country-House Life in Sweden," July, 1934 (out of print; refer to your library).

CARLETON MITCHELL

A FOREST OF CRANES RISES ALONG THE WATERFRONT OF GÖTEBORG, SWEDEN'S CHIEF PORT

Atlantic gateway to Sweden, Göteborg also is the western terminus of the chain of lakes, rivers, and canals that links the country's east coast on the Baltic with the west coast across from the tip of Denmark where the Skagerrak meets the Kattegat. The waterway is a popular vacation playground for Swedish families who are devoted to outdoor sports, particularly boating.